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ABSTRACT

Costa Rica's Universidad Estatal a Distancia (UNED), the education system in the country, and information on Costa Rica are considered. UNED is helping to equalize geographical inequalities of access to higher education. Overall, UNED's academic programs have been aimed at those who want to obtain professional qualifications. In the first semester 1979, 75.4 percent of UNED's employed students came from the professional, administrative, and managerial classes. Data suggest that UNED is not providing increased educational opportunities for the economically deprived. Although the direct cost of studying at UNED is less than that of the other universities, the lack of grants available to UNED students effectively bars the poorer members of society from pursuing a degree course with the university. The university initially concentrated on the development of a series of professionally oriented degree and diploma programs and also developed extension studies programs and a free studies program. More recently, UNED has begun to develop a secondary school (bachillerato) program that will entail distance education. Information is also provided on: the course structure, media and methods, course design, student support services, student evaluation, quality of teaching materials, student attrition, UNED's organizational and governance structure, costs, and school and higher education systems in Costa Rica. The country's physical setting, population and economy, communications, and people are described. (SW)

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COSTA RICA'S UNIVERSIDAD ESTATAL A DISTANCIA : A CASE STUDY

1. THE COUNTRY

Physical setting

The Republic of Costa Rica, with an area of 50,901 square kilometers (19,652 square miles) lies in the Central American isthmus, with Nicaragua to the north and Panama to the south-east. Physically, there are a number of mountain ranges, both volcanic and non-volcanic, bounded by the wide, forested rainy plains of the Atlantic (Caribbean) coast and the narrower, drier plains of the Pacific. Administratively the country is divided into seven provinces (see figure 1), which are themselves divided into cantons.

Population

The population of approximately 2.3 millions (1980) is culturally and racially homogeneous. In the 1950 census (the last to inquire into racial origin) 97.7% of the population claimed white or *mestizo* (mixed European-American indian) descendency. 90% of Costa Ricans are Catholic and the majority speak Spanish. The most significant non-Spanish/mestizo group is the Afro-Caribbean, based on Limón, who are in the majority English-speaking and Protestant. There are about 9,000 indigenous indians in six linguistic groups.

60 percent of the population live in the intermontane basin or Central Valley (see figure 1) where the principal crops are coffee and sugar-cane, and where the capital (San José) and major towns (Alajuela, Heredia and Cartago) are located. 7 percent of the population lives in the rainy Atlantic region (centred on Limón). Here the banana is the main crop. The rainy northern plains (north of Ciudad Quesada) are now being developed. In 1973 some 6 percent of the population lived here. 15 percent of the population lives in the dry hot plains of Guanacaste and northern Puntarenas Province, where cattle and cereals are the main agricultural activities. Finally, some 15 percent of the population live in the southern zone, with its banana and palm oil plantations.

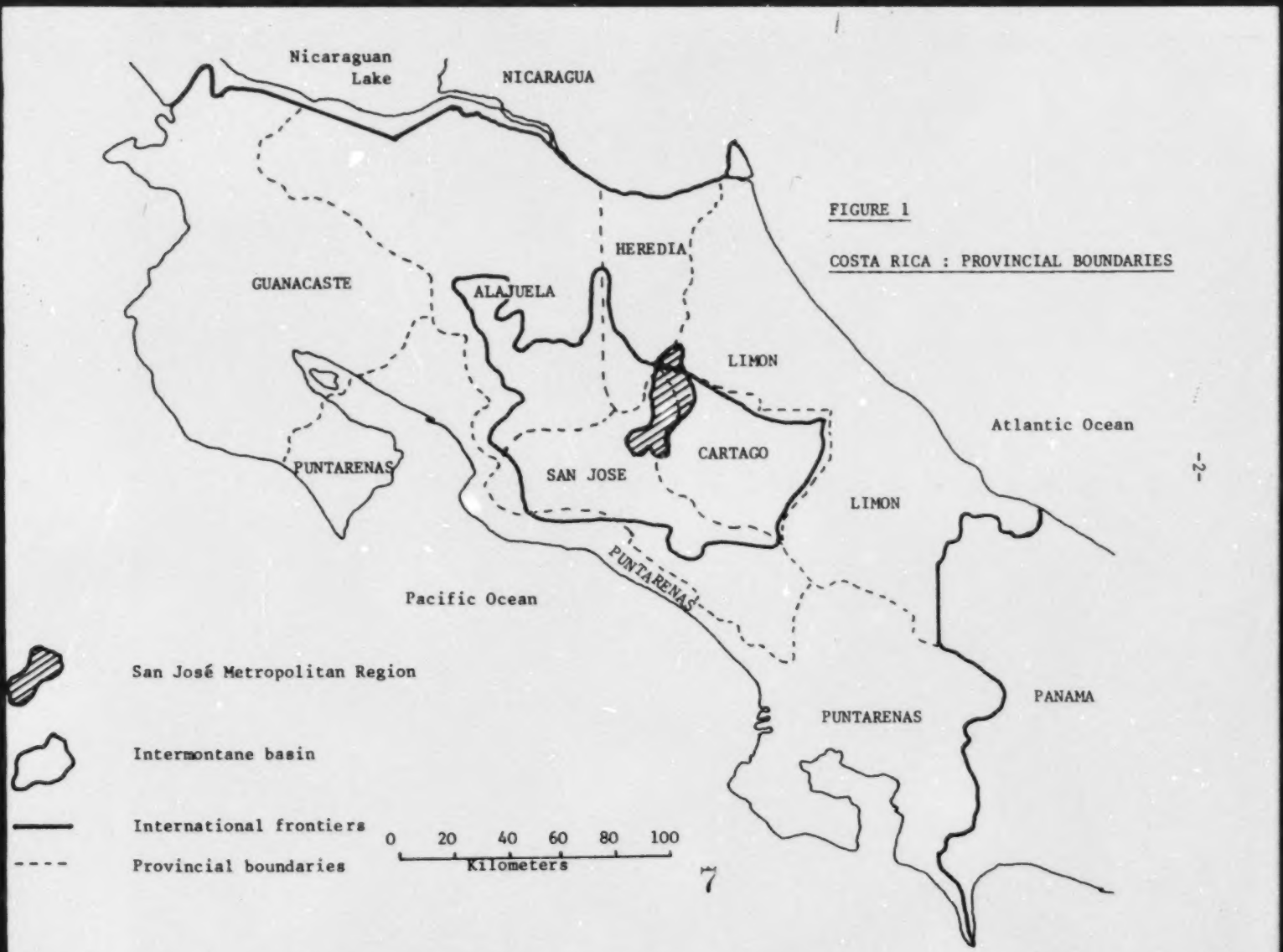


FIGURE 1

COSTA RICA : PROVINCIAL BOUNDARIES

The homogeneity of the Costa Ricans can, however, be overemphasised. For example, a 1973 study showed that heads of families living in the Central Valley received an income five times greater, on average, than those coming from the outlying regions (Booth, 1974: 37). They were also better off in terms of public and private services. In 1973, 57 percent of the communities in the Central Valley had a doctor, whereas only one in 85 communities outside of that area had. There were very few secondary schools in the outlying regions and none in the northern plains, though primary schools were widely distributed.

In 1973, 58 percent of the population were classified as living in rural areas, many in communities of less than 500 persons. 42 percent of the population was classified as living in urban areas, with one quarter of the population living in the San José Metropolitan Area (see figure 1).

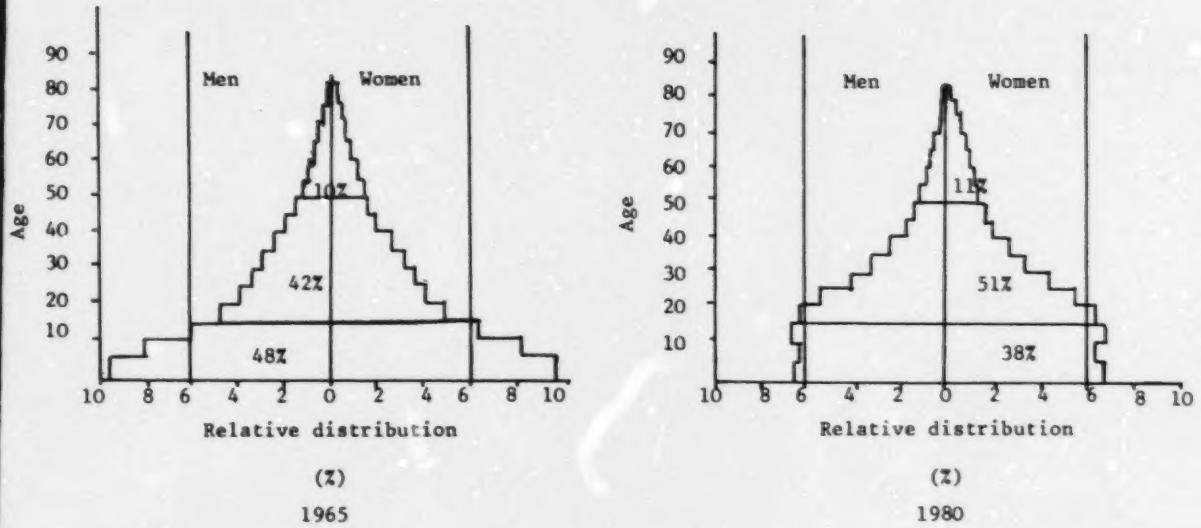
The population is growing at about 2.4 percent per year. In the last two decades there has been a fundamental shift towards smaller families with the birthrate declining from 52 per 1000 of population in 1954 to 48 per 1000 in 1960 to 29.5 per 1000 in 1975. The population pyramid is undergoing rapid change as the birthrate declines (see figure 2).

The Economy

33 percent of the total population was classified as being economically active in 1977: that is, they were over 12 years old, were not at school, and were either employed, unemployed or looking for work for the first time. 60 percent of the labour force are between 15 and 35 years old: 73 percent are employees, 16 percent are self-employed, 8 percent are employers and 6 percent work within the family without wages. One in five of the labour force is female. The education and skills of the workforce reflect the high desertion rates in schools, the cultural emphasis on academic subjects, and the traditional preference for non-manual work. In 1973, 41 percent of Costa Ricans aged 15 or over had not completed primary school and 10 percent had never been to school. Overall there is a chronic lack of technically trained persons.

FIGURE 2

CHANGES IN THE POPULATION PYRAMID : COSTA RICA, 1965-1980



Industrialisation is impeded by the existence of cultural values such as the low prestige placed on manual work and the tendency of the middle classes to ape the conspicuous consumption of the rich at the expense of capital accumulation (Goldkind, 1961).

The economy of Costa Rica still depends on agriculture to a large extent. 35 percent of the labour force was still employed in agriculture in 1976 as against 14.6 percent in manufacturing, 6.5 percent in construction, and 43.4 percent in services (transport and communications, commerce, government, utilities and personal services).

In 1976 industry for the first time contributed a greater proportion than agriculture to Gross Domestic Product. The relative figures for 1978 were 24 percent (industry) and 19.7 percent (agriculture). On the other hand, many agricultural products never reach the market, and industry contributed only 18.3 percent of the Gross National Product. Agricultural products (particularly coffee and bananas) are the chief source of foreign exchange.

One of the most persistent myths about Costa Rica is that it is a country of small landowners. While 46 percent of farms have under 5 hectares, they cover only 1.8 percent of agricultural land. Such farms are insufficient to meet the minimum needs of a family. At the other extreme, 1.1 percent of farms have over 500 hectares and account for 36 percent of agricultural land. Guess (1978: 599) reports that there is evidence of a decline in the importance of the small farmers in the face of the demands of an agro-export dominant class. With rural population growing at a faster rate than rural jobs, there is increasing unemployment (5.8 percent in 1976) and sub-employment (in 1977, 32.8 percent of the rural labour force worked under 40 hours a week).

In 1978 coffee was the most important earner of foreign exchange for Costa Rica (US 314 million dollars) followed by bananas (155 million dollars), tourism (71 million dollars), and meat (60 million dollars). Dependence on agricultural exports means that Costa Rica is particularly vulnerable to fluctuations in commodity market prices (particularly of coffee and bananas), and, in the case of the banana, to the economic and political pressures which can be brought to bear by the banana companies (notably Standard Fruit, United Brands and Del Monte). Other cash crops are cocoa and sugar cane. Rice is being encouraged.

Forestry, which could be an important industry, has yet to be effectively developed. The depletion of the forest area is a major cause for concern, with a nett loss of 50,000 hectares of forested land per annum, bringing with it problems of soil erosion. There is a growing fishing industry.

Mining remains a peripheral activity. The Costa Rican Development Corporation is due to develop sulphur and bauxite deposits. Industrial development is a recent phenomenon which did not gain impetus until the mid-1960s. As recently as 1978, only 15 percent of the labour force worked in industry - although this is in part explained by the capital intensive nature of industrial development. Half the industrial workforce is employed in more than 10,000 factories and workshops which each have less than 20 employees, yet which collectively account for 40 percent of industrial output. The slow development can be accounted for by the smallness of the domestic market, lack of capital investment, lack of skilled or semi-skilled workers, managers and administrators and the inefficient bureaucracy that characterises government institutions, including those charged with promoting development.

Greatest growth has occurred in service industries which by 1979 employed 59 percent of the workforce. Large shops (department stores and supermarkets) remain the exception rather than the rule. The State bureaucracy has expanded enormously in quantitative terms. Reliable statistical data is hard to obtain, but somewhere between 20 and 32 percent of the workforce is paid by the State (La Nación, 17.1.79, 8A). State employees include all those working for the nationalised sectors of the health, insurance, social security, transport, education and banking services, as well as employees in government ministries and agencies.

During late 1980 the Costa Rican economy began to show marked instability, and this was excentuated during the first half of 1981. The official exchange rate of 8.6 colones to the US dollar was abandoned. By September 1981 the colon had fallen to 27 to the dollar, the country had exhausted its foreign exchange reserves, and it had announced a moratorium on its external debt. Low world prices for its exports - coffee, bananas and sugar - and the high cost of oil imports were partly to blame. More fundamentally, however, maintenance of Costa Rica's living standards is dependent on imports of expensive consumer goods.

Communications

In 1977 there were 26,086 kilometers of highways, of which 2,008 were paved. Two passenger and goods carrying railways link San José with the Pacific and Atlantic ports of Puntarenas and Puerto Limón. New port facilities are being developed on both coasts. Domestic and international airlines serve the country. In some areas the aeroplane remains the easiest form of access. There were 73,450 passenger cars and jeeps and 45,800 commercial vehicles in 1977. The bus (3,500 in 1977) remains the most usual form of transport for the majority of Costa Ricans. At the beginning of 1981 there were over 200,000 telephone lines. By 1977, 82 percent of houses in the San José Metropolitan Region had television, compared with 69 percent in the Central Valley, and more than 50 percent elsewhere. Radio receivers are universal.

The People

Costa Ricans place great emphasis on the classless nature of their society. Like many statements about Costa Rican democracy, this is a myth. However, Stone (1975: 73) suggests that the class system in Costa Rica maintains a delicate balance between elitism and equality that makes it different from any other in Latin America.

The *hidalgos*, descended from the original Spanish colonists, have dominated politics. 75 percent of the deputies elected to the Legislative Assembly between 1821 and 1970 have come from 12 families; 3 families supplied 35 of the 46 presidents in this period (Stone, 1975:26, 189, 251-252). The concentration of political power in a few families is mirrored at the institutional level by the tendency to concentrate both authority and responsibility in a few hands. In Costa Rica, political power sharing remains an alien concept at either the national or the institutional level. Nevertheless, one interpretation of the 1948 Revolution (Costa Rica's last) suggest that this marked the emergence of the propertied middle classes into economic power sharing with the *hidalgo* class. A study of changes in the distribution of wealth between 1961 and 1971, as measured by declared income, suggests that the middle classes have gained at the expense of the upper class, with lower classes gaining nothing (Cespedes, 1973: 53).

The distribution of wealth is clearly uneven. 50 percent of Costa Ricans share 20 percent of the national income, while the top 5 percent receive 25 percent of national income. The upper (20,000 persons), upper middle (100,000) and lower middle (300,000) classes account for 22 percent of the population. 78 percent of the population are classified as lower class. Although salaries have risen in line with inflation, the 1973 census showed that 70 percent of workers earned less than 700 colones (then equivalent to US 82 dollars) a month, and 42 percent gained less than 400 colones (about 47 dollars).

It is the attitudes of the middle class that dominate, with their disdain for manual work, their preference for professional or office-based jobs, their belief in education as the means to acquire such posts, and their tendency towards conspicuous consumption at the expense of capital accumulation, investment and saving.

2. THE EDUCATIONAL SYSTEM

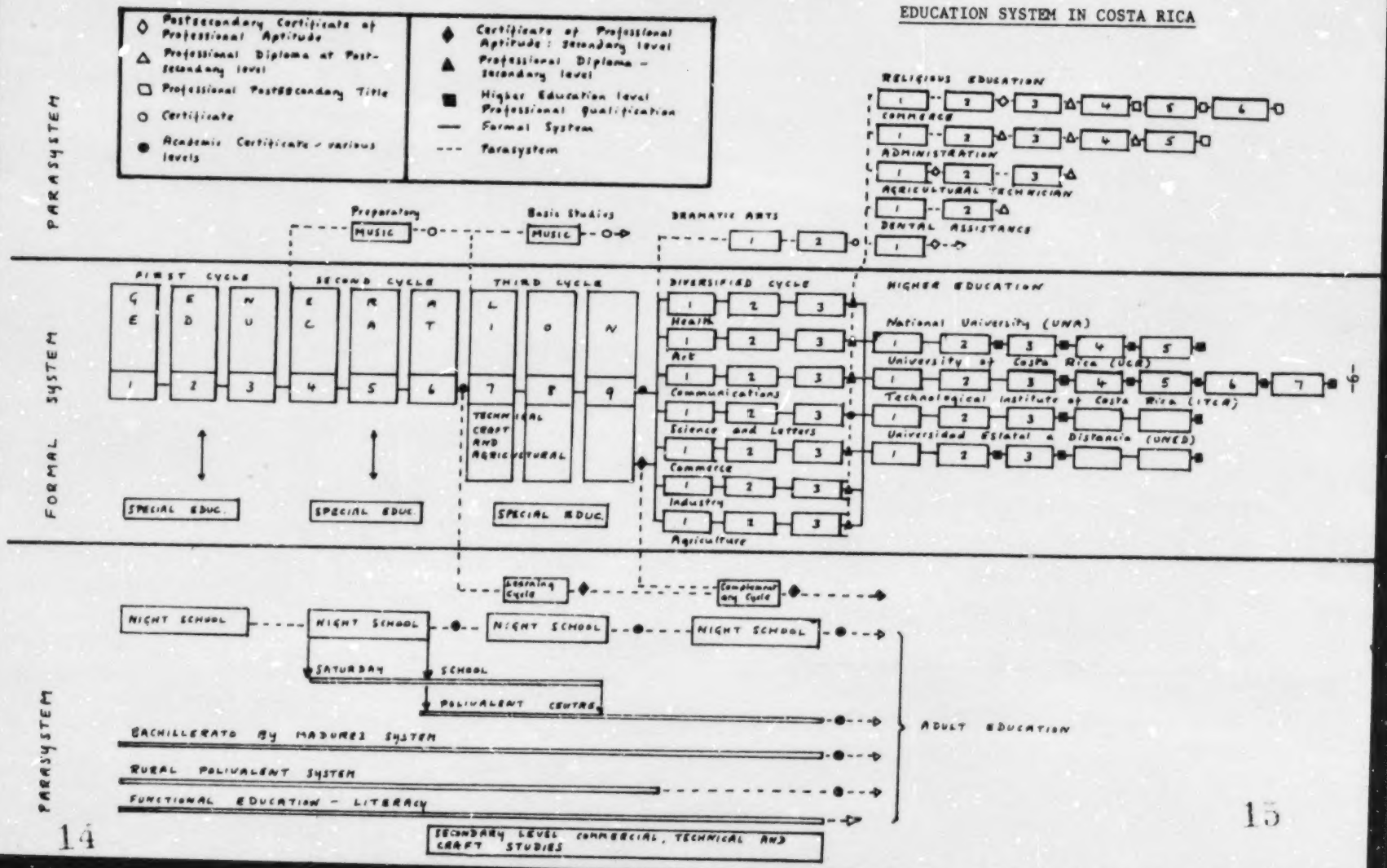
School System

The history of education in Costa Rica since the 1940s has been one of continued expansion and a marked improvement in standards. In quantitative terms, growth has been significant, responding to the increase in population, the rising expectations of the middle class, and the demands of the economy for a more education workforce. In 1943, for example, 11 percent of the population was enrolled in 739 primary schools. In 1977, 19 percent of a much larger population was enrolled in 2,798 public and 67 private schools at the primary level. In 1943 there were 5 public colleges and a number of private ones. By 1977 there were 200 public and 26 private secondary colleges. In 1943, 716 students were enrolled in the newly founded University of Costa Rica: in 1976, 44,000 students were registered in the universities.

Figure 3 is a schematic presentation of the structure of Costa Rica's education system which is divided into four levels: preschool education of two years duration; primary education, of six years duration, made up of two 3 year cycles (Cycles I and II); secondary education, of six years duration, comprising one three year cycle (Cycle III) of general education followed by a further 3 year diversified cycle (Cycle IV) in academic, technical, agricultural and other fields. Cycles I, II and III are compulsory. Cycle IV is relatively selective

Figure 3

EDUCATION SYSTEM IN COSTA RICA



in nature and it designed to enable a person to take his or her place in working life at an appropriate professional or technical level. It also provides the necessary academic qualifications for access to higher education.

The present educational system dates from the reforms of 1971/73 which aimed, firstly, to raise the average educational level of the population, particularly in the less developed zones, so as to achieve national integration and provide all citizens with a better chance to contribute to national, social and economic development; secondly, to modernise the educational system to meet the social and economic needs of the country and promote the development process; and, thirdly, to keep the education budget's percentage of the national revenue within its limits, without prejudice to the improvement of the education service in quality and quantity.

There was plenty of evidence that the educational system was not meeting the educational needs of the country. The 1973 census showed that only 5 percent of the labour force had graduated from secondary school, while only 30 percent of those aged 15 to 19 years were attending college in 1973. As Solano and Olivera (1974) commented, the education service was:

> failing to equip the student for his entry into the labour market with a 'skill', and failing to give the individual the motivation and intellectual tools to continue moving toward and not falling behind with the rise of new conditions of life and employment.

The 1970s have seen an improvement in the proportion of children in each age group attending school. Between 1970 and 1978 the proportion of children aged 6 to 12 who attended school rose from 88 percent to 92 percent, of those aged 13 to 15 from 51 to 57 percent, and of the young adults aged 16 to 18 in the diversified fourth cycle, the proportion rose from 23 to 33 percent (MEP, 1980: Table 9).

Nevertheless, in spite of the high rate of literacy that is claimed to exist, 89.8 percent in 1973, the qualitative standards of the education system give cause for concern. Functional illiteracy amongst those aged over 10 was estimated to be as high as 30 percent in 1974.

The present Minister of Public Education, Maria Eugenia Dengo de Vargas, suggested in 1977 that one cause for the poor results in the schools was the relatively low number of days in which the schools were open (175 per year) coupled with the short hours children study (as low as 2½ hours per day in single-teacher schools).

The standard of the teaching is criticised as well. Heavy emphasis on rote learning, poor discipline in the class rooms, the lack of stimulus given to the pupils, an overloaded curriculum (particularly in secondary schools), and the use of tests which emphasise memory rather than manipulation of facts, are all factors which effectively lower the standard of the pupils emerging from the system. Teachers complain that the system of automatic promotion *within* each cycle means that weak students are promoted beyond their capabilities, only to be held back when they fail at the end of the third year of a cycle. Lowered academic standards also mean that a higher proportion of students now obtain their *Bachillerato* (secondary school certificate). This has increased pressures on the universities, and this, coupled with the expansion of the universities, has almost certainly led to a diminution in higher education standards which were in any case never very high.

Higher Education

Higher education in modern Costa Rica dates from the founding of the University of Costa Rica (UCR) in 1940. For three decades UCR monopolised the university sector, but by the early 1970s three problems faced the higher education sector. The first was the pressure for places, which it was forseen would become yearly more acute. The second was the relevance of the academic programmes being offered, and the third was the need to devise means by which the university sector (actually the University of Costa Rica) would become more responsive to changing needs.

The establishment of two new conventional universities was an attempt to solve these problems. The Technological Institute of Costa Rica (ITCR), founded in 1971, was specifically charged with teaching in the fields of technology and applied sciences with a view to meeting the development needs of the country, while the National University (UNA) set out by repudiating the academic approach of UCR in favour of a more practical orientation biased towards social change.

The foundation of two new campus-based universities raised the problem of coordinating the higher education system as a whole. In December 1974 the Rectors of UCR, UNA and ITCR agreed to establish the National Council of Rectors (Consejo Nacional de Rectores CONARE) with overall responsibility for coordinating the work of the three universities. A private university, the Autonomous University of Central America (UACA) operates outside the system. UACA had 2,456 registered students in the third semester of 1979. More recently (1981) a proposal for a second private university, the University of San José, has received influential backing. Approval for the establishment of a United Nations University of Peace to offer, eventually, post-graduate courses is being actively sought by the Government

During the 1970s the conventional Costa Rican universities responded to the increasing pressure for places (Table 1) although, as we have noted above, there are those who believe that expansion was allowed to occur in parallel with a decline in academic standards.

The aim was not only to satisfy demand but also to meet the manpower needs of the country. Here, too, the universities have had their critics. In 1979, when CONARE evaluated the results of university growth in the period 1976-80, it noted the tendency of the university sector to overprovide educated manpower at the higher educational level and to underprovide at the technical and lower professional levels (CONARE, 1979: 17).

CONARE was also concerned with the need to democratise access to higher education. In its 1975-80 plan, CONARE noted that the costs of study coupled with the loss of potential earnings involved in attending university was too great a sacrifice for many families. A 1973 survey indicated that while 61 percent of Costa Rican families had a monthly income of under 1000 colones, only 28 percent of UCR students came from such families. Conversely, 17 percent of students came from the 6 percent of families with a monthly income of over 3000 colones (CONARE, 1975: III-6, III-9, III-39).

TABLE 1

Demand for entry to conventional Costa Rican universities

Year	Number of persons sitting university entrance examination (UCR, UNA, ITCR)	Number of persons admitted to conventional universities	
		Absolute	As a % of those sitting exam
1974	13,653	5,307	38.9
1975	16,538	8,775	53.1
1976	23,664	9,871	41.7
1977	24,983	10,185	40.8
1978	18,107	9,382	51.8
1979	29,415	10,821	36.8

Source : Rumble (1981a; 1981b) Table 6.1

Note : the figures for 1978 were collected on a different basis from those for all other years. In 1978 students who sat entrance examinations were counted only once: in other years they were counted for each university applied to.

It was against this background that one must consider the decision, taken in 1977, to establish a fourth State-founded university, the Universidad Estatal a Distancia (UNED), which it was hoped would not only open up educational opportunities to new target populations but also alleviate the pressure of social demand and thus help democratise higher education in Costa Rica. Moreover, it was believed that this could be done at a lower unit cost than that which could be achieved by expanding the conventional universities (CONARE, 1975: VII-84 to VII-101; CONARE, n.d: 19-20). These factors, CONARE argued, justified serious consideration being given to the development of distance education, and *the possible initiation of a five year pilot project to evaluate its usefulness in Costa Rica.*

3. THE UNIVERSIDAD ESTATAL A DISTANCIA (UNED)

Origins

In spite of CONARE's suggestion that a distance teaching university be established only as a five year pilot project, no detailed project appraisal for UNED was ever carried out. The idea of a pilot project was quietly shelved. During 1976 a small group of educationalists worked with the then Minister of Public Education, Fernando Volio Jiménez, on the project. Their prime concern was to take account of the problems then facing the higher education sector (see Section 2 above) by founding a university that, through its use of distance teaching methods, would:

1. Bring higher education to a greater number of the adult population, who, for various reasons, could not take advantage of the traditional system and hence remain without an adequate university-based professional career preparation
2. Provide a solution to the problems facing the agricultural and working population who have the ability to enter a university but who, for economic, social or geographic reasons could not enter one of the existing universities.

3. Accommodate an important part of the student population who year by year remain without a chance of registering in the existing Universities, and serve as a means of support to the existing university sector in terms of those students who, in spite of the fact that they have the required qualifications, remain outside the universities because of the shortage of places available (MEP, 1976).

The remaining sections of this paper examine the Universidad Estatal a Distancia as it was at the end of 1980 - three and a half years after its formal creation in April 1977.

The Students

Table 2 provides basic information on the characteristics of UNED's undergraduate and free studies programme students.

Unfortunately, although UNED was established to help meet the social demand for university education, it is not possible to determine from the statistics available the percentage of UNED's students who come from the following groups:

a) secondary school graduates who have failed to obtain a place at a conventional university

b) secondary school graduates who wish to pursue university studies but who for one reason or another cannot or do not want to attend a campus-based university and who have consequently never applied to enter a campus-based university

c) adults who were unable to attend a university following the end of their secondary schooling.

It is clear that a number of UNED's applicants are in fact disappointed conventional university (CU) applicants - a fact that is attested to by a large number of applications UNED receives following the announcement of the names of successful CU applicants in the national press. It is also clear that a number of UNED applicants are CU dropouts.

In spite of the inadequacy of the data available, it seems that UNED is opening up educational opportunities to persons who are or were in the past lacking in opportunity. For example, the existing conventional universities all have their main campuses in the San José

TABLE 2

Basic data on UNED Students

	Finally registered students July 1978	Finally registered students November 1978	New students admitted in 1979 (second semester)
100%	1284	1020	2061
	%	%	%
Sex			
Male	58.5	48.2	53.6
Female	41.5	51.8	46.4
No response	-	0.5	0.4
Age			
Under 22	12.0	16.8	25.6
22-31	57.5	52.1	53.0
32-41	24.6	25.3	16.4
Over 41	5.1	4.8	3.0
No response	0.9	0.9	1.2
Average	29.1 years	28.6 years	27.1 years
Civil Status			
Single	36.9	42.0	50.8
Married	60.3	54.0	44.0
Other	2.3	3.9	4.6
No response	0.5	0.1	0.6
Province of Residence			
San José	34.0	33.7	41.7
Alajuela	16.0	17.2	15.3
Cartago	5.0	5.5	6.7
Heredia	8.0	8.7	9.7
Guanacaste	12.0	8.0	7.6
Puntarenas	18.0	17.0	10.6
Limón	7.0	9.0	8.0
No response	-	0.2	0.4
Occupational Status			
Working	92.2	90.7	75.4
Not working	7.6	8.0	11.5
Housewife	-	-	11.5
No response	0.2	1.3	1.6
Monthly Income in Costa Rican colones			
Under 1000	4.3	9.7	FIGURES
1001-2000	24.1	22.8	
2001-3000	29.2	20.3	
3001-5000	25.5	25.3	NOT
5001-8000	4.6	7.5	
Over 8000	0.1	1.3	
No response	12.3	13.5	AVAILABLE
Secondary School Qualifications			
Bachillerato in Sciences or Letters	70.9	66.2	FIGURES
Technical Bachillerato	12.1	12.0	
Bachillerato por Madurez	7.9	8.3	
Certificate of Conclusion of Diversified Cycle (Cycle IV)	7.3	11.9	NOT
Other qualifications	0.2	-	
No response	1.6	1.6	AVAILABLE
Previous studies at higher education level			
Yes	16.6	11.5	FIGURES NOT
No	83.4	88.5	AVAILABLE

Source: Rumble (1981a, 1981b) Tables 6.6, 6.7 and 6.8

Metropolitan area. During the 1970s a number of University Centres were founded in an effort to decentralise higher education. However, the range of academic programmes offered at these centres is limited, and UNED is thus able through its use of distance teaching methods to greatly increase higher education opportunities in areas of the country previously not covered by the Universities (13 of its 22 Academic Centres are in towns where there are no other higher educational facilities). UNED has thus increased the range of professional degree courses offered to persons living outside the Central Valley. Table 3 shows the geographical origins of students, relative to population, and clearly shows that UNED is helping to equalize geographical inequalities of access to higher education, particularly for persons in Guanacaste, Limón and Puntarenas Provinces. In assessing UNED's importance, it should be born in mind that while distances to be covered are not great, travel between San José and other areas by public transport is extremely slow by North American or European standards.

One of the major factors working against equal educational opportunities in Costa Rica is the cost of education relative to the socio-economic status of the student. Direct comparisons between UNED and the CU's is difficult because the majority of UNED's students are working and hence their status is dependent more on their own circumstances than on those of their parents.

On the whole, UNED's academic programmes have been aimed at persons who want to obtain a professional qualification. Thus, in the first semester of 1979, 75.4 percent of UNED's employed students came from the professional, administrative and managerial classes. In contrast, in November 1977 only 33.5 percent of the working population were employed in these sectors, while only 16.5 percent of the fathers of a 1978 sample of UCR students were employed in these sectors (Rumble, 1981a, 1981b: Tables 7.6 and 7.7). This bias in UNED towards the middle and upper classes is confirmed by a survey of 219 students registered in the first semester of 1979. Asked to indicate to which class they belonged, only 4.6 percent of respondents placed themselves in the lower class, while 58.9 percent said they felt they belonged to the lower-middle class, and 30.1 percent felt they belonged to the upper class (Rumble, 1981a, 1981b). Only 6.8 percent of students registered in the second semester of 1978 earned under 2000 colones a month - that is, roughly the sum which would take them out of the lower

TABLE 3

Geographical origins of University Students

Province	Population	Students admitted to the Universities				
		UCR 1979	ITCR 1979	UNA 1979	UNED 1979/1	UNED 1979/2
100% =	2,125,620	5,907	1,503	3,411	-	2,061
	%	%	%	%	%	%
San José	37.0	52.6	40.6	48.5	28.3	41.7
Alajuela	17.3	16.8	18.1	12.7	22.7	15.3
Cartago	10.9	7.7	17.5	4.7	7.0	6.7
Heredia	7.1	7.2	5.5	19.3	5.5	9.7
Guanacaste	9.6	5.3	4.9	4.6	11.1	7.6
Puntarenas	11.9	4.2	4.7	4.5	16.3	10.6
Limón	6.3	2.6	1.5	2.4	8.8	8.0
No information	-	3.6	7.2	3.3	-	0.4

Source: Rumble (1981a, 1981b) Table 7.5

classes. In comparison, 35.1 percent of students registered in UCR in 1979 came from families with a monthly income of under 2000 colones; 64.9 percent of UNA students registered in 1978 came from families with a monthly income of under 2400 colones a month; and 31.4 percent of ITCR student's families had a 1978 income of under 1500 colones a month.

It seems clear that UNED is not providing increased educational opportunities for the economically deprived. This is not necessarily the fault of the University. Although the direct cost of studying at UNED is less than that of the other universities, the lack of grants available to UNED students effectively bars the poorer members of society from embarking on a degree course with the University.

The "time-free" and "space-free" nature of distance education makes it particularly attractive to adults who have jobs or family commitments.

Although UNED's students are on average older than those at CUs (see Table 4) there has been a tendency for this factor to be less important with each semester; the average age of students has dropped from 29.1 years in 1978/1 to 27.1 in 1979/2. The fall in the average age of UNED students followed UNED's decision to abandon its early requirement that students should be aged 23 or over. Currently there is no age restriction on entry, and since any person with a high school bachillerato is eligible for entry, students may be as young as 16 or 17 years of age. The fall in the average age has been accompanied by a fall in the proportion of students who are married, from 60.3 in 1978/1 to 44.0 percent in 1979/2. Nevertheless, a far higher proportion of UNED students are married than is the case in the CUs (Table 4.)

Comprehensive information on the proportion of CU students who are employed is not available. A sample of UNA and UCR students showed the proportion of those employed increased with age, so that about 75 percent of those aged 26 to 29 were employed (Rumble, 1981a, 1981b: Table 7.11). Overall, 45.8 percent of UCR and 40.4 percent of UNA students surveyed in the first semester of 1979 had jobs. However, the sample did not indicate the extent to which they were working full or part-time. In contrast, 75.4 percent of UNED's students in 1979/2 were also working while a further 11.5 percent were "housewives". There is evidence, then, to suggest that a far higher proportion of UNED's students are employed than is the case in CUs, while a significant proportion are tied to the home.

TABLE 4

Comparative data on the age and marital status of University students in Costa Rica

	UCR Students 1979		UNA Students 1978		ITCR Students 1978		UNED Students 1979/1	
100% =	29,797		7,098		137		2,061	
		%		%		%		%
Age	< 21	43.1	< 22	49.1	< 21	73.0	< 21	25.6
	21-25	37.5	22-26	26.7	21-25	16.8	21-26	32.5
	> 25	19.4	> 26	24.2	> 25	10.2	> 26	40.7
Marital Status								
Single		78.8		77.7		88.3		50.8
Married		19.3		19.4		11.7		44.0
Other		1.9		2.9		-		4.6
No information								0.6

Source: Rumble (1981a, 1981b) Tables 7.10 and 7.11

UNED's academic programmes

The University initially concentrated on the development of a series of professionally-orientated degree and diploma programmes *(carreras)*. Thirteen such *carreras* are currently in existence, under development or planned. In parallel, the University set out to develop a number of Extension Studies Programmes and a Free Studies Programme which allows students to register on particular degree and and diploma courses on a "one-off" basis. More recently, UNED has begun to work on a secondary school *(bachillerato)* programme, which will enable people to obtain their *bachillerato* at a distance. Table 5 lists UNED's current and planned academic programmes.

Before developing a particular programme, UNED's planners try to identify and assess the extent of the need and the degree to which other institutions are already meeting it. One of the objectives of CONARE is to ensure that unnecessary duplication of effort between the universities does not occur.

The course structure

In the *carreras*, the basic unit of study is the course, each of which is equivalent to three credits. Each credit represents a theoretical 50 hours work over an 18 week semester. The planned course load of 4 courses per student per semester implies a weekly student workload of 33.3 hours.

Students in the professional studies programme register on a particular *carrera*. They must have the normal minimum educational qualification for entry to a Costa Rican University, or a recognised equivalent. Most students are required to do the *Ciclo Básico* first, although students with General Studies qualifications (that is successful completion of first year university studies) at UCR and UNA can register directly on a *carrera*.

The *Ciclo Básico* consists of five courses (Spanish, Mathematics, Social Sciences (History), Philosophy and Science) of three credits each, together with a sixth, non-credit, course on studying at a distance. Its main purpose is to introduce the student to a wide cultural panorama, to provide him with a basis of knowledge as a precursor to higher level studies, and to facilitate re-entry to the habits of study for those who have been out of the educational system for some time.

TABLE 5

UNED's academic programmes

1. Ciclo Básico
2. General Studies
3. Professional Studies (carreras) in
   - 3.1 Educational Sciences for Cycle I and II teachers (Bachelors Degree)
   - 3.2 Educational Administration (Bachelors Degree)
   - 3.3 Business Administration (Diploma)
   - 3.4 Public Administration : Banking (Diploma)
   - 3.5 Administration of Cooperatives (Diploma)
   - 3.6 Farm Management (Bachelors Degree)
   - 3.7 Public Service Administration (Masters Degree)
   - 3.8 Nursing (Diploma)
   - 3.9 Nutrition (Diploma)
   - 3.10 Health Service Administration (Bachelors Degree)
   - 3.11 Development Promotion (Diploma)
   - 3.12 Child Social Services (Diploma)
   - 3.13 Agricultural Extension (Bachelors Degree)
4. Extension Studies
   - 4.1 Environmental Studies
   - 4.2 Teaching of Geography
   - 4.3 Professional Education
   - 4.4 Extension Studies in Health, Family Life, Agriculture, Crafts
   - 4.5 Development of Scientific Interests
5. Secondary School Bachillerato Programme
6. Free Studies Programme

Students taking a *carrera* leading to a diploma are required to take 21 courses (63 credits) at General and Professional Studies levels, as well as the 15 credit *Ciclo Básico*. Students at first degree level take about 38 courses (114 credits) at these levels, together with the *Ciclo Básico*. General Studies courses aim to widen the students' horizons by giving an introduction to such subjects as philosophy, the arts, science and the social sciences. These courses are obligatory but may be taken at any time during a student's studies with the University. Students who proceed through the system at the planned rate of 4 or 5 courses per semester will graduate in 6 semesters (3 years) at diploma level and 10 semesters (5 years) at first degree level. On the other hand, because every course will not be presented each semester, it is likely that students who fail a particular course will be held back until they have retaken it and gained the necessary prerequisite credits in the course to enable them to continue with their studies.

Media and methods

The basic teaching medium is the printed course book of which there is normally one per course. Most of the books also have supplementary material which has been written as a result of the experience gained in teaching the courses. Some of the courses have associated with them set books, which the students are expected to read.

Limited use is made of cassette-books - that is, a number of audio tapes with supporting printed materials which take the place of the basic course text. Television programmes are also produced in limited numbers and are intended to support the written course texts. Limited use of radio began during 1980.

Fortnightly tutorials take place at the University's Academic Centres, of which there are 22 (see Figure 4).

Course design, production and distribution

The curriculum for each *carrera* and course is prepared by the Office of Curriculum Design in the Planning Vice-rectorate. Instructional design is undertaken by the Programme Coordinators in the Academic Vice-rectorate, who consult with various specialist staff.

The main course texts are written by authors who are contracted by the full-time Academic Producers. The latter monitor the authors' progress and arrange for their work to be internally and externally assessed. A proportion of the authors (about 30 percent) have previously been involved in the curriculum design, in the sense that they have been consulted by the University's Curriculum Designers on the content to be included in a course. Supplementary materials are normally written by the Tutor Coordinators who have direct experience of the problems encountered by students in the texts.

Texts are printed by the University's Press (Editorial UNED). The Press has its own full-time staff of designers, editors, and compositors. It publishes a number of books for the commercial market as well as producing the University's course texts. It has an estimated annual production capacity of 200 books of 180 pages each.

Once printed, the course books are passed to UNED's Warehouse where they are stored and eventually dispatched to the various bookshops which act as outlets, and from which the students can purchase the books.

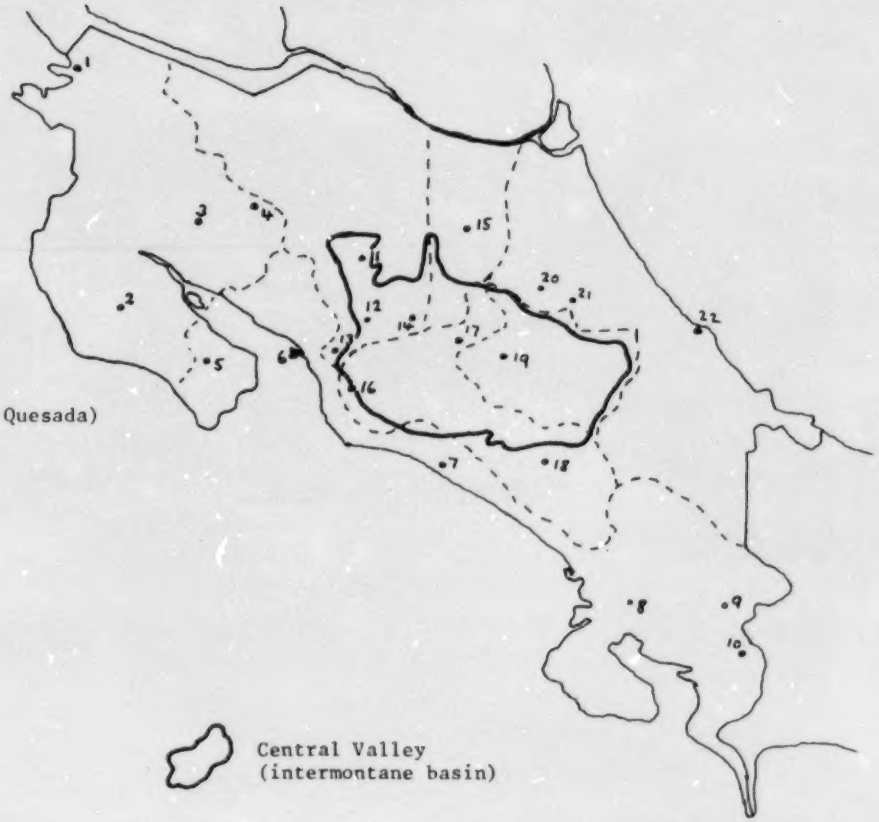
So far as television is concerned, UNED uses the editing and studio facilities of two television companies, Channels 7 and 13. Total output is of the order of 80 programmes per year. The producers are full or part-time members of UNED's staff who liaise closely with the Tutor Coordinators and Academic Producers regarding content. The programmes, which are produced at marginal cost to the University, are transmitted on Channels 7, 11 and 13. Total transmission is of the order of four hours per week (eight programmes). Video cassette playback machines have been installed in some of UNED's Academic Centres so that students who are unable to view the open air transmission can have a chance to see the programmes.

Radio is also used to a small extent. UNED has its own sound studio (commissioned in 1980) and at the end of 1980 it was broadcasting for a total of five hours a week on Radio Nacional and Radio Universidad.

FIGURE 4

LOCATION OF ACADEMIC CENTRES

1. La Cruz
2. Nicoya
3. Cañas
4. Tilarán
5. Jicaral
6. Puntarenas
7. Quepos
8. Palmar Norte
9. San Vito
10. Ciudad Neily
11. San Carlos (Ciudad Quesada)
12. Palmares
13. Orotina
14. Alajuela
15. Río Frío
16. Puriscal
17. San José
18. Pérez Zeledón
19. Cartago
20. Siquirres
21. Guápiles
22. Limón



Student Support Service

The fortnightly tutorials are seen as part remedial and part suppotive of the main teaching medium, the printed course texts. Tutorials are not compulsory. Students can also contact tutors by telephone at certain set hours. UNED uses the tutorials to obtain feedback on the problems which students encounter in their courses. Every other week the tutors meet with one of the University's full-time Tutor Coordinators - each of whom is responsible for the tutors on two or three courses. At these meetings, student learning problems are analysed and the results of the meetings are used to determine the content of television programmes, the need for supplementary printed materials, and the need for changes to the course texts when they are reprinted.

The tutors themselves are part-time employees. They are subject area specialists, responsible to the Tutor Coordinators. They work in a peripatetic manner, visiting the Academic Centres only to give the tutorial.

Assessment and examination

During each 18 week semester, students are expected to do a number of assignments (normally four per course) which are corrected by the tutor, and to attend mid-course and end-of-course examinations. The assignments count for 20 percent of the overall final grade and the examinations for 80 percent. Students have to obtain an overall grade of 70 percent to pass the course. The assessment and examination materials are prepared by the Tutor Coordinators.

The quality of the teaching materials

The quality of the teaching materials produced by UNED can be considered at two levels: as academic materials appropriate to an institution of higher education; and as teaching materials suitable for use by students studying at a distance.

Generally speaking, UNED's texts are broken down into a number of themes (usually 3 to 5 per book). Each theme is generally introduced by two sections specifying the overall objectives of the theme, followed by a number of specific objectives. The main text then follows. This may be quite long (up to 50 pages). It is followed by a resumé of the main ideas presented in the text; a number of self-assessment questions for the student to answer on his own, sometimes of the short-answer kind

but more usually a series of multiple-choice questions; by a list of the formal assignments which the student is required to undertake; and, finally, by answers to the self-assessment questions.

In almost none of the texts is the student required to pause and think about what he is reading. There are points at which the rhythm of reading is broken by the use of boxes in second colour print to pick out and stress important concepts, and by the occasional use of diagrams. However, the material is not generally structured in a way that invites students to reflect on what has been written. The placing of self-assessment questions at the end of the text reinforces the temptation for the reader to get on to the end of the section as quickly as possible and with the minimum of intellectual effort. By the time the student does reach the end of the section, he or she has had to absorb far too much material, much of it factual, to be able to use it in a creative manner. The widespread use of multiple-choice questions does not require the student to analyse the material and use it to solve problems. The whole emphasis is on rote learning. There is little chance that the student will be able to master the material presented to him.

Unfortunately, the control mechanisms which UNED uses to maintain academic standards - normally through the contracting of external academic assessors for a course - do little to ensure that the contracted authors will produce sound teaching materials. The external assessors themselves lack experience in the development of such materials. Moreover, the present rate of course production means that the full-time internal Academic Producers, who might do this by bringing the skills of the educational technologist to bear on the author's manuscript, are overworked and hence unable to achieve anything within the existing six month design and production schedules.

In any correspondence teaching system, the printed and written word deserves particular attention as the main medium of distance education. Holmberg's theory of distance study as a kind of guided didactic conversation is of particular relevance here. Holmberg places great emphasis on:

> the relationship between the course developers and the students created by an easily readible and reasonably colloquial style of presentation and the personal atmosphere of the course, superficially characterised by, for example, the author(s) referring to himself/herself/themselves as *I* or *we* respectively and the students being spoken to as *you*. (Holmberg, 1980: 114)

On the whole the style of UNED's texts do not allow this dialogue to materialize. As Rumble (1981a, 1981b) remarks, the frequent use of the passive construction in Spanish removes all sense of dialogue from the text, while even the use of polite second person singular or plural (*usted, ustedes*) places a reserve on the dialogue compared to the more familiar English *you*.

This failure to achieve a guided didactic conversation may underlie the general demand from students for face-to-face tutorials. A high proportion of students do attend tutorials. For example, a survey of students registered at the end of the first semester of 1979 showed that 68.5 percent had attended an Academic Centre four or more times a month. Nevertheless, there is evidence that students would welcome additional face-to-face tuition. 38.6 percent of the same group of students felt that there was insufficient tutor-student contact of any kind, while 25.6 percent felt that there was not enough face-to-face tutorial contact.

The demand for face-to-face tuition may, however, arise from expectations about the nature of learning in a Latin American culture. Escotet (1978: 78), for example, has suggested that Latin American education has inforced dependence on the teacher and a high degree of memorisation, in direct contrast to the qualities of self-discipline and independent study required in distance learning system. This is consistent with the view of Latin American culture as one in which great emphasis is placed on interpersonal contact.

However, in spite of these criticisms, it is worth saying that the best of UNED's course texts are excellent and do achieve the guided didactic conversation upon which Holmberg places emphasis. Overall, the approach adopted by UNED seems to be correct and the faults which have been identified above could be remedied by appropriate training of the Academic Producers; by briefing authors more fully; and possibly by slowing down the rate of production of new courses, which has been very high.

Student administration

Persons interested in applying for entry to UNED have to buy a Matriculation Pack which contains information on the University, an application form, and a fees payment form. Students are required to pay the matriculation fee (200 colones), which entitles them subsequently to register on one course. This fee is paid direct into one of UNED's bank accounts. Proof of payment is then sent by the student together with his or her application form to UNED's Central Admissions Office. Students' applications are vetted against their academic qualifications, and a list of accepted students is published in the national press. Students then attend one of the Academic Centres to register on one or more courses. At this stage, any additional course registration fees become due (100 colones for the second course and a further 150 for the third and fourth courses taken). Continuing students also attend the Academic Centres to pay their matriculation and course registration fees. Any student may withdraw from any course he has registered on during the first 22 days of the teaching period.

Student progress

None of the basic data is available in sufficient detail to enable one to evaluate with any degree of confidence the efficiency or effectiveness of the University, as measured by student progress. Dropout is, however, a serious problem, as Table 6 shows.

The causes of drop-out are complex, but two main reasons were cited by students who left the system in the first semester of 1979: 28 percent of those responding to a survey said that they dropped out because they could not reconcile the demands of their jobs with those of their study, while 30 percent said they could not find sufficient time to study. In addition, 13 percent deserted because they did not like studying at a distance, 3 percent left for reasons of ill-health, 4 percent because the *carreras* offered did not meet their needs, 4 percent for economic or financial reasons, and 4 percent for reasons of maladministration (UNED, 1980a: 9-10).

TABLE 6

Student progress at UNED. Registered students by cohort

Semester		Cohort					Total
		1978/1	1978/2	1979/1	1979/2	1980/1	
number of students still registered	1978/1	1936					1936
	1978/2	n/a	n/a				1223
	1979/1	n/a	n/a	n/a			2986
	1979/2	410	287	678	1674		3049
	1980/1	503	349	363	888	3797	5900
% of cohort registered 1980/1		26.0	-	-	53.0	100.0	

n/a = not available

TABLE 7

Average student workloads at three Costa Rican universities

University	Average credit loading per semester	Average student workload per week (hours)	Average student workload per credit per week (hours)
UCR	16.8	15.9	0.94
UNA	12.4	14.8	1.2
UNED	9.8	11.1	1.13

A report analysing possible causes of dropout suggested that a number of factors combined "to create in the student's mind a lack of confidence both in themselves and in UNED" (Pengelly, 1979: 18). Pengelly (1979: 19, 20, 22, 23) suggested that the key factors involved in dropout were:

* The student does not know what is expected of him - so he does not know how to behave or how to apply himself effectively to his work.
* The student does not know how to organise his studies - so he cannot apply himself effectively to his work.
* The student has no realistic basis on which to judge his progress - so he does not know whether to continue or drop-out.
* The student encounters many study problems - so he cannot achieve any confidence in his own ability.
* The student has no basis, which he can understand, for deciding how to study - so he does not know how to build up his study skills.
* The student lacks confidence in the quality of the items which make up the teaching package - so he can rationalize his own failures as being UNED's fault.
* The student encounters many small problems and uncertainties in almost all his dealings with the university - so he loses confidence in the institution.
* The student cannot obtain accurate and reliable information - so he cannot decide rationally how to act when he has to make a decision and hence he has to behave in a largely arbitrary manner.
* The student cannot obtain adequate personal advice about his non-academic problems - so he regards the task of coping with the demands made upon his as excessive.
* The student cannot identify with UNED or his fellow students - so he feels isolated and lacking any support which renders him less able to cope with his other problems.
* The student does not get what he expects from the tutorial system (given his misconception of the tutor's role in a distance teaching system) - so he blames the quality of the tutorials or tutors for his lack of success.

Pengelly suggested that these factors combine with lack of confidence to instil in students a belief "that the University does not really care about its students and their problems" (1979: 21) and also that it is impossible to get the help needed to overcome these problems (1979: 23).

Although direct evidence to support Pengelly's views is not available my own experience tends to support his views. However, one area where there is more evidence is the effect of student workload on dropout. Two factors are particularly important here. The first involves the theoretical overloading of UNED's courses relative to the number of hours which part-time students have available to study. A full-course load (4 courses) would in theory require 33.3 hours per week over the 18 week semester. This workload stems in part from the standard definition of a credit that has been adopted by CONARE (to be equivalent to 45 hours work on the part of the student) and modified by UNED (to be equivalent to 50 nours work on the part of the student). In fact, UNED's students take on average 9.8 credits per semester, and work on average 11.1 hours per week (UNED, 1980b). All the evidence available suggests that the official definition of a credit in student workload terms is grossly out of line with what actually happens in UNED and in the conventional universities, and that in this respect UNED's students are not much different from their conventional counterparts, as Table 7 indicates (see page 30).

The second factor is that a survey of average working hours by socio-economic class indicates that on average 62.4 percent of the working population having a working week in excess of 47 hours. In fact, with the exception of professional (45 percent) and technical (54 percent) staff, a majority of all categories of employed persons work what is in effect a 6 day week (MEIC, 1978: Table 28). Inevitably this severely reduces the amount of leisure time available for part-time study.

Thus the evidence available suggests that UNED's part-time students have actual weekly workloads that are broadly comparable with those of students at the distance teaching Universidad Nacional Abierta (Venezuela) and the Open University (United Kingdom). Unfortunately data is only available on students who have successfully completed their courses, but it does suggest that excessive workload may be more of an excuse for dropout, than a reason. The official definition of a credit as requiring 45 (or 50) hours work is unreal. In theory, a

3 credit course requires 150 hours of student work over the semester. In practice, students work on average 61 hours. Fortunately, it appears (although this is an untested supposition) that the official definition of a credit has little influence on the design of UNED's courses. The amount of material given to the student does not appear to be excessive given the average workload of 61 hours per week put in by successful students. The over-riding impression is one of formal lip-service to the standard established by CONARE, with broad comparability between the universities in terms of what actually happens.

More worrying, perhaps, are the implications of Pengelly's report on dropout, which suggests that there may be a number of fundamental factors underlying dropout, the identification and correction of which will be far from easy.

At the same time, it is worth emphasising that UNED is by no means alone in having relatively high dropout and repitition rates. It is clear that dropout is a serious problem in the conventional Costa Rican universities, which students often enter without adequate preparation. Another important factor in the conventional universities is the part-time nature of the course with students almost invariably taking longer to complete their courses than the time scheduled - in some faculties more than double. To persist in such a long drawn-out course requires a high academic motivation which is frequently lacking.

Organisational Structure

UNED's organisational structure is based on a small Rectorate and three Vice-rectorates (Administration, Planning and Academic) (see Figure 5).

The Administrative Vice-rectorate provides a range of central services (financial control, accounts, transport, buildings maintenance, security, etc.) as well as student administrative services (admissions, registration, records and welfare). It also oversees the production of UNED's course texts and the other books produced by Editorial UNED.

The Planning Vice-rectorate is largely concerned with drawing up the University's medium (one to five year) and short term (under a year) plans. Specialist offices formulate the five year University Plan, the buildings and accommodation plans, short-term project control schedules and the annual budget. A documentation and information centre is located in the Planning Vice-rectorate, as are offices concerned

with institutional evaluation and statistical services. The Office of Curriculum Development is also located here.

The Academic Vice-rectorate is concerned with the design and development of teaching material, teaching and research.

This structure is subject to a number of weaknesses, most of which arise from the general failure to foster a sense of co-dependence between the various specialists involved. The rigid structuring of the organisation on a hierarchical basis results in the loss of any sense of mutual cooperation across functional areas that is so important for the fulfillment of tasks such as those involved in the design and teaching of multi-media distance courses. Particular weaknesses occur at the interfaces between the Office of Curriculum Design (in the Planning Vice-rectorate) and the authors and full-time Academic Producers (located in the Academic Vice-rectorate); between the Tutor Coordinators (who prepare the assessment materials) and the curriculum designers (who have specified the course objectives that are supposed to be tested); and between the authors and the Tutor Coordinators, so that authors have very little awareness of the processes undertaken in the actual teaching of a course.

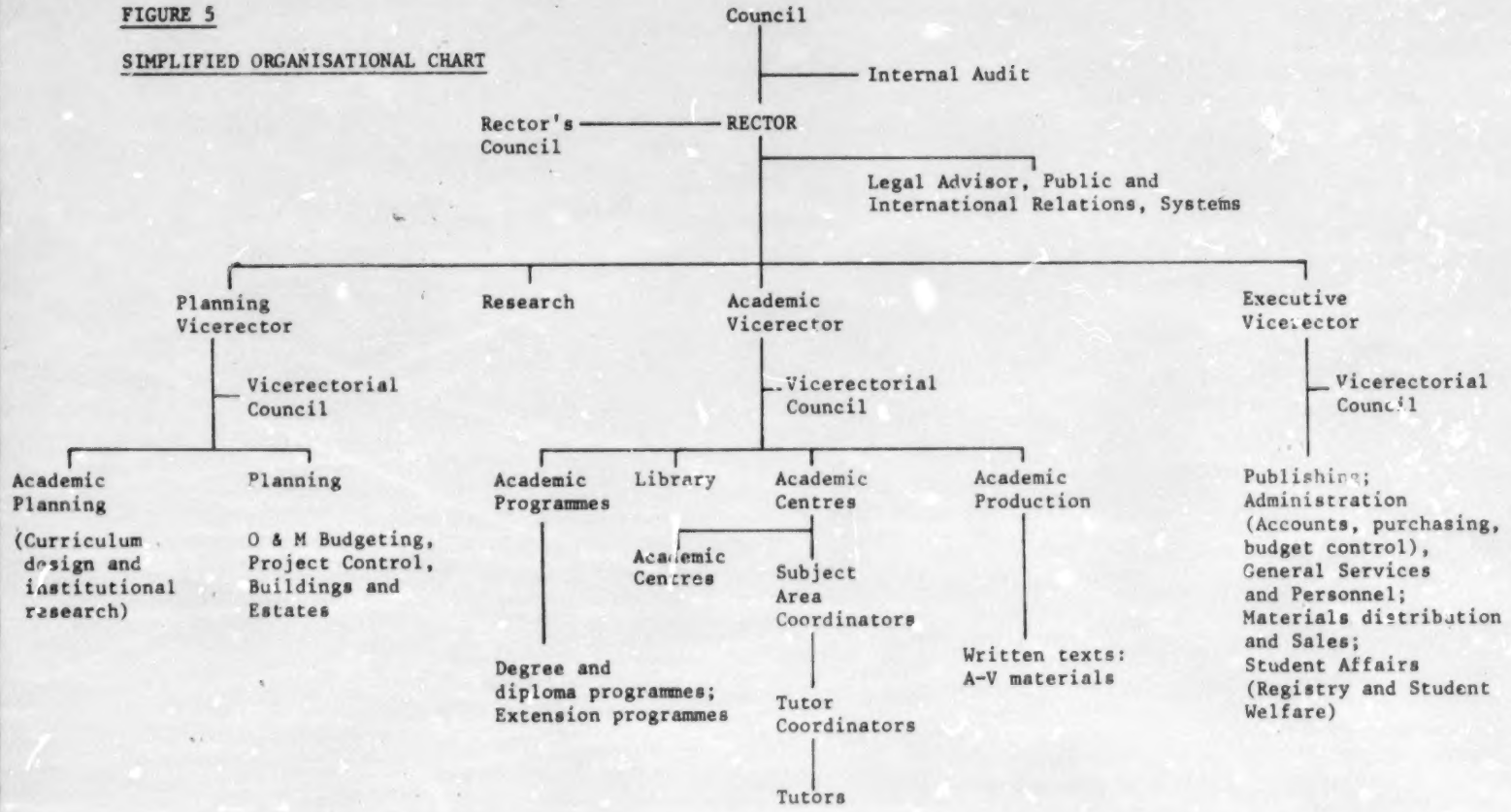
Decision-making

In UNED decision-making remains the preserve of the University Council which, with the exception of the Rector, is composed wholly of external lay members. The Council normally acts on the advice of the Rector and of the three Vice-rectors, who are in attendance at its meetings. The Rector also meets formally with his Vice-rectors on a weekly basis (Rectors' Council). It is here that the corporate management of the University is exercised. However, the usefulness of the Rectors' Council is reduced by its restricted membership and by the fact that only in very exceptional cases are non-members called upon to give their professional advice.

Below this level, the work of each Vice-rectorate is coordinated through the normally weekly meetings of the Vice-rectorate Councils, each of which is chaired by the appropriate Vice-rector and has as its members all the office heads in the Vice-rectorate. Persons from other Vice-rectorates do not normally attend such meetings. The whole emphasis of the structure is therefore hierarchical and departmental, culminating in the Rector and the University Council.

FIGURE 5

SIMPLIFIED ORGANISATIONAL CHART



A certain measure of cross-function integration is provided by a number of standing committees and working groups, each of which work within well-defined terms of reference. These committees draw their membership from any of the Vice-rectorates, as required. However, my subjective view is that their effectiveness is undermined by a number of factors : firstly, the Rector and Vice-rectors do not normally attend such groups. This both lessens their importance and means that their recommendations can more easily be rejected by the Rectors' Council or University Council, should this be felt to be necessary, because such rejection can be done without compromising the position of any of the officers. Secondly, it is clear that such committees are devoid of any power to take decisions, even at a relatively low level, since they must either report (as a committee) to the Rectors' Council or, as individual members, to the appropriate Vice-Rector. The concept of joint decision-making is an alien one. This lack of collective responsibility allows members who have failed to gain their way a ready opportunity to try to reverse a proposal by re-raising the issue outside of committee. It also means that there is a marked reluctance on the part of individuals to raise matters in committee, even where this might seem to be most appropriate. Indeed, an individual who wishes to ensure success for a proposal is far better off if he obtains the consent of his superior (and ultimately his Vice-rector) and then promulgates the matter as a management decision. The result is that there is considerable mutual suspicion and antagonism within the organisation. This gives senior officials considerable scope to play one group off against the other.

The structure is not without its advantages. It enables the officers to respond to problems quickly. However, it effectively works against the complex interdependent nature of distance teaching systems.

Costs

UNED's 1980 budget anticipated expenditure of 55.3 million colones. In a first exercise, Rumble (1981c) analysed UNED's budget against a number of cost-inducing variables and then projected costs forward against current planned expansion. Subsequently, Rumble (1981a, 1981b) modified his cost model for UNED following the decision to introduce the Secondary School *Bachillerato* Programme.

If current plans hold (see Table 8) and if the cost model developed by Rumble (1981a, 1981b) is valid, then costs are likely to rise from 55.3 million colones to 137.5 million colones. About 32.4 percent of the increase of 82.2 million colones can be accounted for by the introduction of a new Secondary School *Bachillerato* programme. A further 18.2 percent would be accounted for if UNED sought to expand its broadcast element from the current 80 programmes per year to 240 per year. 17.8 percent reflects an increase in student numbers, and 15.8 percent reflects cost increases following on the planning increase in courses presented as part of the *carreras*.

Overall, the proportion of expenditure devoted to the various academic programmes of the University is likely to change quite significantly. Table 9 shows the extent of this change given the various assumptions built into Rumble's model (1981a, 1981b: Table 9.6)

In spite of this overall increase in expenditure, Rumble shows that average student costs are likely to fall as student numbers increase (Table 10).

These figures compare favourably with average student costs in conventional Costa Rican universities which in 1978 were as follows (at 1980 price levels): UCR, 11,110 colones; UNA, 17,360 colones; ITCR, 37,240 colones. It is unlikely that the conventional universities have the same potential for economies of scale as UNED has. Thus, as UNED reaps economies of scale, so its cost-efficiency as measured by average student costs is likely to increase dramatically. On the other hand, it is worth noting that the average cost per credit registration at UNED is not quite as favourable to UNED's position (owing to the greater average credit-loading per student at UCR and UNA) (see Table 11).

Nevertheless, Rumble's projections suggest that even here the economies of scale reaped by UNED will mean that by 1985 the average cost per credit per year will have fallen below the current level at UCR, to 297 colones.

Overall, UNED seems to be critically balanced at present, being more or less on a par, in cost-efficiency terms, with the University of Costa Rica, and somewhat more efficient that the other two conventional universities. However, if UNED can expand its student numbers in line with its plans, then it will reap economies of scale and significantly increase its cost efficiency relative to the other Costa Rican universities.

TABLE 8

Planned Expansion of activities, 1980 - 1985

Degree programmes (Carreras)	Semester 1980/1	Semester 1985/2
Number of programme coordinators	5	12
Number of subject area coordinators	7	13
Initial production of courses	82	none planned at present
Maintenance of courses (production load). Maintenance equivalent to 10% of initial production load	2.6	12.3
Total production load in courses	84.6	12.3
Number of courses being presented	30	132
Number of students	5900	12490
Extension programme		
Number of programmes	2	7*
Secondary School Equivalency Programme (Bachillerato)		
Initial production of courses	-	-
Maintenance of courses (production)	-	1.8
Total production load	-	1.8
Number of courses being presented	-	18
Number of students	-	13000
Support services		
Audio-visual materials : number of TV and radio programmes plus associated video cassettes to be produced (in each medium)	38	120
Number of Academic Centres	19	24*

* = guestimate

TABLE 9

Proportion of total projected expenditure devoted to various academic programmes

	Semester 1981/1	Semester 1985/2
100% = (colones thousands)	38,921	69,145
	%	%
Programme		
Ciclo Basico, General and Professional Studies, and Free Studies programme	78.1	52.5
Extension Studies Programme	16.8	20.7
Secondary School Bachillerato programme	5.1	26.8

TABLE 10

Projected average student costs per annum, 1980-1985 (colones at 1980 price levels)

Year	Professional Studies *(Carreras)* programme	Secondary School *(Bachillerato)* programme
1980	10,923	-
1981	8,514	4,772
1982	7,012	3,206
1983	6,368	2,870
1984	6,072	2,800
1985	5,814	2,842

TABLE 11

Average cost per credit per year, 1980 (in colones at 1980 price levels)

University	Average credit loading per annum	Average cost per credit per annum
UCR	32.2	345
UNA	24.8	700
UNED	19.6	557

The financing of the universities

During 1979 and 1980 the financing of Cosat Rica's four State funded universities became increasingly problematic. The three conventional universities were financed from the Special Fund for Higher Educational Financing, while UNED was funded from other sources. From 1981 all four universities will be financed from the Fund, each receiving a fixed percentage sum (UCR, 59 percent; ITCR, 11.5 percent; UNA, 23.5 percent; UNED, 6 percent). These proportions will remain in force until 1985. In an uncertain economic climate, it seems likely that this agreement will increase tensions between the universities as those institutions that are still developing find themselves starved of funds, while others have no incentive to improve their cost-effectiveness.

Conclusion

Although UNED has only been operating for four years, it has developed rapidly both as an institution and in terms of the breadth of its academic programmes. As a consultant, it is all too easy to concentrate on the failings of an institution. After all, a consultant is there to help identify those areas where he feels things are not working well and to suggest improvements. It is also all too easy to misconstrue the evidence, particularly where one is working in a foreign culture and language. On the other hand, I have been privileged in the number of contacts I have had with the University, first in October 1976, identifying technical assistance needs for the early planning of the University; then in April and May 1978, working with two colleagues on the early planning of the University; again in September and October 1979, evaluating with the same two colleagues the institution's progress and offering technical advise on a number of aspects; and finally, working in the Planning Vice-rectorate for a twelve month period beginning February 1980.

Although it is still too early to make definitive judgements on the success or failure of UNED, it is clear that like all essentially healthy institutions, UNED is still developing, continually adapting itself and improving its system in the light of experience. It is a vigorous institution that is meeting previously unsatisfied demands for university education. It is now expanding into other academic areas. It has the potential to reap economies of scale and prove itself cost-efficient in comparison with the conventional universities in Costa Rica, although it is not as year clear whether it will in fact

succeed in this. Dropout is a serious problem, but the University's authorities are seeking means to improve the situation. Overall, UNED is a microcosm of the possibilities and problems of teaching at a distance. It is doing much to prove the potential worth of distance teaching methods at the higher education level.

NOTES

An earlier case study was prepared in 1978 on behalf of the Open University's Centre for International Cooperation and Services : Greville Rumble (1978) *The Universidad Estatal a Distancia : a case study in distance learning*, Milton Keynes, OUCICS, Mimeograph. The present work is, however, wholly new in its content.

Section 1 of the paper draws heavily on Mavis, Richard and Karen Biesanz, *Los Costarricenses*, San José, 1979: Editorial Universidad Estatal a Distancia. This book is by far and away the best general guide to modern Costa Rica.

Until mid 1980 the Costa Rican colon had a fixed (official) exchange rate of 8.6 to the US dollar. During the latter part of the year there were two exchange rates, an artificially low official rate, maintained at 8.6 to the dollar and the free market rate which fluctuated wildly, and at one time reached 16.1 to the dollar. The situation on the free marked eventually led to the Government to abandon the official exchange rate. By August, 1981 the colon had reached a rate of 27 to the dollar. By November, it had sunk to 40 to the dollar.

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